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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,469	11/07/2001	Shinji Kaneko	01728/LH	2860

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EXAMINER

SIKDER, MOHAMMAD YUNUS

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,469

Applicant(s)

KANEKO, SHINJI

Examiner

MOHAMMAD Y SIKDER

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-9 is/are allowed.
- 6) ☒ Claim(s) 5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☒ Claim(s) 1-4 and 9 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claim 1, drawn to a variable shape mirror comprising a thin film, classified in class 359, subclass 883.
- II. Claim 2, drawn to specific features of the thin film which is being conducted by an electrode of a second film, classified in class 359, subclass 884.
- III. Claim 3, drawn to specific features of the thin film which is supported in the opening of the frame member which is being bonded to a substrate at a specified interval by way of spacer, classified in class 359, subclass 846.
- IV. Claim 4, drawn to a manufacturing method of variable shape mirror comprising applying a photosensitive coating material, classified in class 359, subclass 900.
- V. Claims 5-8, drawn to specific features of the thin film which is being formed of a sensor for detecting the deformation of the thin film, classified in class 356, subclass 300.
- VI. Claim 9, drawn to specific features of the thin film which is being deformed by applying a fluid pressure, classified in class 359, subclass 224.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does

not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require the particulars of the subcombination as claimed such as the thin film which is being conducted by an electrode of a second film. The subcombination has separate utility such as the thin film which is being conducted by an electrode of a second film.

Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require the particulars of the subcombination as claimed such as thin film which is supported in the opening of the frame member which is being bonded to a substrate at a specified interval by way of spacer. The subcombination has separate utility such as thin film which is supported in the opening of the frame member which is being bonded to a substrate at a specified interval by way of spacer.

Inventions IV and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the

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process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process.

Inventions I and V are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require the particulars of the subcombination as claimed such as the thin film which is being formed of a sensor for detecting the deformation of the thin film. The subcombination has separate utility such as the thin film which is being formed of a sensor for detecting the deformation of the thin film.

Inventions I and VI are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does

not require the particulars of the subcombination as the thin film which is being deformed by applying a fluid pressure. The subcombination has separate utility such as the thin film which is being deformed by applying a fluid pressure.

Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as the thin film which is being conducted by an electrode of a second film. See MPEP § 806.05(d).

Inventions IV and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process.

Inventions II and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as the thin film which is being conducted by an electrode of a second film. See MPEP § 806.05(d).

Inventions II and VI are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as the thin film which is being conducted by an electrode of a second film. See MPEP § 806.05(d).

Inventions IV and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process.

Inventions III and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility such as the thin film which is supported in the opening of the frame member which is being bonded to a substrate at a specified interval by way of spacer. See MPEP § 806.05(d).

Inventions III and VI are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are

shown to be separately usable. In the instant case, invention III has separate utility such as the thin film which is supported in the opening of the frame member which is being bonded to a substrate at a specified interval by way of spacer. See MPEP § 806.05(d).

Inventions IV and V are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process.

Inventions IV and VI are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process.

Inventions V and VI are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention V has separate utility such

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as the thin film which is being formed of a sensor for detecting the deformation of the thin film. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, III, IV, V, VI, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Leonard Holtz on 6/17/03 a provisional election was made without traverse to prosecute the invention of Group V, claims 5-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-4, 9 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC, 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fried (4,618,223) in view of Zayhowski et al. (5,022,745).

Fried (4,618,223) shows a thin film 14 having a reflecting plane, a supporting member 16, means 10 which deforms the thin film.

Thus, Fried (4,618,223) discloses the invention substantially as claimed except for deformation detecting sensor.

The use of deformation detecting sensor is well known in the art and can be seen in Zayhowski et al. (5,022,745), see col. 2, lines 7-10.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use deformation detecting sensor as disclosed by Zayhowski et al. (5,022,745) in the mirror adjustment device of Fried (4,618,223) to achieve the device as claimed, because the use of such sensor would detect the deformation of the mirror to improve the optical adjustment of the mirror.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-8 are allowed.

REASONS FOR ALLOWANCE

The following is an Examiner's Statement of Reasons for Allowance:

The claims are allowable over the prior art for at least the reason that the prior art fails to reasonably teach or suggest the deformation sensor formed on the outer circumference of the thin film, and the outer circumference is greater in film thickness as compared with the central part of the thin film as set forth in the claimed combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONTACT INFORMATION

Papers related to this application may be submitted to Group 2870 by facsimile transmission. Papers should be faxed to Group 2870 via the PTO Fax center located in

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the Crystal Plaza 4. Faxing of such papers must conform with the notice published in the official Gazette, 1096 OG 30 (November 15, 1989). The CP-4 Fax Center number is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application should be directed to M. Sikder whose telephone number is (703) 305-5471.

Thursday, July 10, 2003


MOHAMMAD SIKDER
PRIMARY EXAMINER